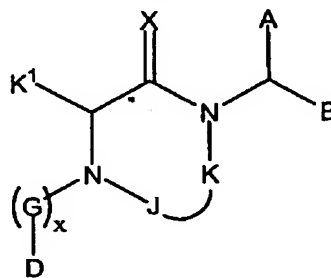


IN THE CLAIMS

The listing of claims herein will replace all prior versions and listings of claims in the application.

1. (Currently amended) A compound of formula (I):



(I)

and pharmaceutically acceptable salts derivatives thereof, wherein:

A and B are independently selected from -CH₂-CH₂-E or -CH₂-CH₂-CH₂-E;
~~E, (C₁-C₁₀)-straight or branched alkyl, (C₂-C₁₀)-straight or branched alkenyl or~~
~~alkynyl, or (C₅-C₇)-cycloalkyl or cycloalkenyl; wherein 1 or 2 hydrogen atoms in said~~
~~alkyl, alkenyl or alkynyl are optionally and independently replaced with E, (C₅-C₇)-~~
~~cycloalkyl or cycloalkenyl; and wherein 1 to 2 methylene (-CH₂-) groups in said~~
~~alkyl, alkenyl, or alkynyl groups are optionally and independently replaced by -O-,~~
~~S-, S(O)-, S(O)₂-, =N-, N= or N(R³)-;~~

~~— or B is hydrogen;~~

~~— wherein R³ is selected from hydrogen, (C₁-C₄)-straight or branched alkyl, (C₃-C₄)-straight or branched alkenyl or alkynyl, or (C₁-C₄)-bridging alkyl, wherein said bridge is formed between the nitrogen atom to which said R³ is bound and any carbon atom of said alkyl, alkenyl or alkynyl to form a ring, and wherein said ring is optionally benzofused;~~

wherein E is phenyl, furyl, thienyl, pyridyl, pyrrolyl, oxazolyl, thiazolyl, imidazolyl, pyrazolyl, isoxazolyl, triazolyl, oxadiazolyl, pyrimidinyl, pyrazinyl, indolyl, isoindolyl, benzimidazolyl, benzothiophenyl, quinolinyl, isoquinolinyl, and benzothiazolyl; a saturated, partially saturated or unsaturated, or aromatic monocyclic or bicyclic ring system, wherein each ring comprises 5 to 7 ring atoms independently selected from C, N, O or S; and wherein no more than 4 ring atoms are selected from N, O or S;—

wherein 1 to 4 hydrogen atoms in E are optionally and independently replaced with halogen, hydroxyl, hydroxymethyl, nitro, SO_3H , trifluoromethyl, trifluoromethoxy, $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl, $(\text{C}_2\text{-C}_6)$ -straight or branched alkenyl, $\text{O}-[(\text{C}_1\text{-C}_6)\text{-straight or branched alkyl}]$, $\text{O}-[(\text{C}_3\text{-C}_6)\text{-straight or branched alkenyl}]$, $(\text{CH}_2)_n\text{-N}(\text{R}^4)(\text{R}^5)$, $(\text{CH}_2)_n\text{-NH}(\text{R}^4)\text{-(CH}_2)_n\text{-Z}$, $(\text{CH}_2)_n\text{-N}(\text{R}^4\text{-(CH}_2)_n\text{-Z})(\text{R}^5\text{-(CH}_2)_n\text{-Z})$, $(\text{CH}_2)_n\text{-Z}$, $\text{O-(CH}_2)_n\text{-Z}$, $(\text{CH}_2)_n\text{-O-Z}$, $\text{S-(CH}_2)_n\text{-Z}$, CH=CH-Z , 1,2-methylenedioxy, C(O)OH , $\text{C(O)O-}[(\text{C}_1\text{-C}_6)\text{-straight or branched alkyl}]$, $\text{C(O)O-(CH}_2)_n\text{-Z}$ or $\text{C(O)-N(R}^4)(\text{R}^5)$;

wherein each of R^4 and R^5 are independently hydrogen, $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl, $(\text{C}_3\text{-C}_5)$ -straight or branched alkenyl, or wherein R^4 and R^5 , when bound to the same nitrogen atom, are taken together with the nitrogen atom to form a 5 or 6 membered ring, wherein said ring optionally contains 1 to 3 additional heteroatoms independently selected from N, O or S; wherein said alkyl, alkenyl or alkynyl groups in R_4 and R_5 are optionally substituted with Z.

each n is independently 0 to 4;

each Z is independently selected from a saturated, partially saturated or unsaturated, monocyclic or bicyclic ring system, wherein each ring comprises 5 to 7 ring atoms independently selected from C, N, O or S; and wherein no more than 4 ring atoms are selected from N, O or S;

wherein 1 to 4 hydrogen atoms in Z are optionally and independently replaced with halo, hydroxy, nitro, cyano, C(O)OH , $(\text{C}_1\text{-C}_3)$ -straight or branched alkyl, $\text{O-(C}_1\text{-C}_3)\text{-straight or branched alkyl}$, $\text{C(O)O-}[(\text{C}_1\text{-C}_3)\text{-straight or branched alkyl}]$, amino, $\text{NH}[(\text{C}_1\text{-C}_3)\text{-straight or branched alkyl}]$, or $\text{N-}[(\text{C}_1\text{-C}_3)\text{-straight or branched alkyl}]_2$;

K^1 is selected from hydrogen, E, $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl, $(\text{C}_2\text{-C}_6)$ -straight or branched alkenyl or alkynyl, wherein 1 to 2 hydrogen atoms in said alkyl, alkenyl or alkynyl is optionally and independently replaced with E;

wherein K^1 is optionally substituted with up to 3 substituents selected from halogen, OH, $\text{O-(C}_1\text{-C}_6)\text{-alkyl}$, $\text{O-(CH}_2)_n\text{-Z}$, NO_2 , CO_2H , $\text{C(O)-O-(C}_1\text{-C}_6)\text{-alkyl}$, $\text{C(O)NR}^4\text{R}^5$, NR^4R^5 and $(\text{CH}_2)_n\text{-Z}$;

J and K, taken together with the two nitrogens that they are attached to, form a 6-7 membered piperazine ~~saturated or unsaturated heterocyclic ring, wherein 1 to 2 hydrogen atoms in said ring are optionally and independently replaced with~~ $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl, $(\text{C}_2\text{-C}_6)$ -straight or branched alkenyl or alkynyl;

exo, hydroxyl or Z; and wherein any CH_2 group in said heterocyclic ring is optionally and independently replaced by O, S, S(O) , S(O)_2 , or $\text{N(R}^3\text{)}$; and wherein said ring is optionally fused with E;

G, when present, is $\text{-S(O)}_2\text{-}$, -C(O)- , $\text{-S(O)}_2\text{-Y-}$, -C(O)-Y- , -C(O)-C(O)- , or -C(O)-C(O)-Y- ;

Y is oxygen, or $\text{N(R}^6\text{)}$;

wherein R^6 is hydrogen, E, $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl, $(\text{C}_3\text{-C}_6)$ -straight or branched alkenyl or alkynyl; or wherein R^6 and D are taken together with the atoms to which they are bound to form a 5 to 7 membered ring system wherein said ring optionally contains 1 to 3 additional heteroatoms independently selected from O, S, N, NH, SO, or SO_2 ; and wherein said ring is optionally benzofused;

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D is hydrogen, $(\text{C}_1\text{-C}_7)$ -straight or branched alkyl, $(\text{C}_2\text{-C}_7)$ -straight or branched alkenyl or alkynyl, $(\text{C}_5\text{-C}_7)$ -cycloalkyl or cycloalkenyl optionally substituted with $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl or $(\text{C}_2\text{-C}_7)$ -straight or branched alkenyl or alkynyl, $[(\text{C}_1\text{-C}_7)\text{-alkyl}]\text{-E}$, $[(\text{C}_2\text{-C}_7)\text{-alkenyl or alkynyl}]\text{-E}$, or E;

D is an aromatic monocyclic or bicyclic ring system, wherein each ring comprises 5 to 7 ring atoms independently selected from C, N, O or S; and wherein no more than 4 ring atoms are selected from N, O or S;

wherein 1 to 2 of the CH_2 groups of said alkyl, alkenyl or alkynyl chains in D is optionally replaced by -O- , -S- , -S(O)- , $\text{-S(O)}_2\text{-}$, or $\text{-N(R}^3\text{)}$;

provided that when J is hydrogen or G is selected from $\text{-S(O)}_2\text{-}$, -C(O)C(O)- , $\text{SO}_2\text{-Y}$, or -C(O)-Y , or -C(O)C(O)-Y , wherein Y=O ; then D is not hydrogen;

$x = 0$ or 1; and

X = O or two hydrogens attached to ring carbon.

2. (Currently amended) The compound according to claim 1, wherein:

each of A and B is independently selected from $\text{-CH}_2\text{-CH}_2\text{-E}$ or $\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-E}$; and

E is phenyl; a monocyclic or bicyclic aromatic ring system, wherein said ring comprises 5-7 ring atoms independently selected from C, N, O or S, and wherein 1 to 4 ring atoms are independently selected from N, O or S;

wherein 1 to 4 hydrogen atoms in E are optionally and independently replaced with halogen, hydroxyl, hydroxymethyl, nitro, SO_3H , trifluoromethyl, trifluoromethoxy, $(\text{C}_1\text{-C}_6)$ -straight or branched alkyl, $(\text{C}_2\text{-C}_6)$ -straight or branched

alkenyl, O-[(C₁-C₆)-straight or branched alkyl], O-[(C₃-C₆)-straight or branched alkenyl], (CH₂)_n-N(R⁴)(R⁵), (CH₂)_n-NH(R⁴)-(CH₂)_n-Z, (CH₂)_n-N(R⁴-(CH₂)_n-Z)(R⁵-(CH₂)_n-Z), (CH₂)_n-Z, O-(CH₂)_n-Z, (CH₂)_n-O-Z, S-(CH₂)_n-Z, CH=CH-Z, 1,2-methylenedioxy, C(O)OH, or C(O)-N(R⁴)(R⁵).

3. (Canceled).

4. The compound according to claim 23, wherein D is substituted phenyl.

5. The compound according to claim 1, wherein K¹ is selected from E, (C₁-C₆)-straight or branched alkyl, (C₂-C₆)-straight or branched alkenyl or alkynyl, wherein 1 to 2 hydrogen atoms in said alkyl, alkenyl or alkynyl is optionally and independently replaced with E;

wherein K¹ is substituted with up to 3 substituents selected from halogen, OH, O-(C₁-C₆)-alkyl, O-(CH₂)_n-Z, NO₂, CO₂H, C(O)-O-(C₁-C₆)-alkyl, C(O)NR⁴R⁵, NR⁴R⁵ and (CH₂)_n-Z.

6. The compound according to claim 12, wherein each of A and B is independently selected from -CH₂-CH₂-E or -CH₂-CH₂-CH₂-E; and E is pyridyl.

7. A composition comprising a compound according to claim 1 and a carrier.

8. (Canceled).

9. (Canceled).

10. (Canceled).

11. (Currently amended) A method for stimulating neuronal regeneration or preventing neuronal damage or neurodegeneration in a patient or in an *ex vivo* nerve cell, comprising the step of administering to said patient or said nerve cell a therapeutically effective amount of compound according to any one of claims 1-6.

12. (Currently amended) The method according to claim 11, wherein said compound is administered to a patient in a therapeutically effective amount and is formulated together with a pharmaceutically suitable carrier into a pharmaceutically acceptable composition.

13. (Canceled).

14. (Canceled).

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Canceled).

REMARKS

THE RESTRICTION

The Examiner has required an election under 35 U.S.C. § 121 to one of the following five groups:

I. Claims 1-7, 11-12, drawn to a compound of formula I, wherein J and K taken together with the two nitrogen atoms form a five-membered ring, compositions thereof, and methods therewith;

II. Claims 1-7, 11-12, drawn to a compound of formula I, wherein J and K taken together with the two nitrogen atoms form a six-membered ring, namely, piperazine, compositions thereof, and methods therewith;